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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/802,854 | 03/18/2004 | Takeo Tsukamoto | 03500.017967. | 5858 |
| 5514 | 7590 | 03/24/2006 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112 | | | WILLIAMS, JOSEPH L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2879 | |

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,854

Applicant(s)

TSUKAMOTO ET AL.

Examiner

Joseph L. Williams

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/25/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The amendment and response filed on 04 January 2006 has been entered and overcomes the rejections to the claims.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-51244 in view of JP 2003-55768, both of record by Applicant, as cited by the Japanese Notification of Reason for Rejection.

Regarding claims 1-3, ('244) discloses a method for manufacturing carbon fibers by means of a thermal CVD method, the method comprising at least a step of heating a substrate including a catalyst arranged on a surface of the substrate in a depressurized atmosphere including a carbon containing gas, and the partial pressure of the carbon containing gas is 10 Pa or less.

JP ('244) does not disclose the full pressure when growing the carbon fibers.

Further regarding claim 1-3, JP ('768) teaches a method of manufacturing graphite film (read carbon fibers) comprised of, in part, a thermal CVD method and a carbon containing gas is introduced together with a carrier gas of hydrogen and the growth atmosphere is 133.3 to 1333 Pa, for the purpose of improving the shape of the layer of the carbon film on the substrate.

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Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the growth atmosphere of ('768) in combination with the method ('244) for the purpose of improving the shape of the layer of the carbon film on the substrate.

Regarding claims 4-6, ('244) teaches the partial pressure of the carbon film is 1 Pa.

Regarding claim 7, ('768) teaches the carbon containing gas is introduced into the depressurized atmosphere together with a carrier gas.

The reason for combining is the same as for claim 1 above.

Regarding claim 8, ('768) teaches the carrier gas is hydrogen.

The reason for combining is the same as for claim 1 above.

Regarding claim 9, ('768) teaches the carrier gas is an inert gas.

The reason for combining is the same as for claim 1 above.

Regarding claims 14-17, ('244) teaches the use of Pd and Co as catalyst particles.

Regarding claims 18-23, ('244) teaches the carbon fibers are used as graphite nanofibers, and are used in as an electronic source. The recitation of electron-emitting devices, image forming members, light emitting members, and secondary battery are intended use limitations and thus not afforded patentable weight. Furthermore, it is well known in the art that carbon fibers are used in such devices.

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-51244 in view of JP 2003-55768 as applied to claim 1 above, and further in view of Fushimi et al. (US 6,656,007).

Regarding claim 10, ('244) in view of ('768) teaches all of the claimed limitations except for the carbon containing gas being carbon hydride gas.

Further regarding claim 10, Fushimi teaches in column 15, lines 57-64, the use of carbon hydride gas in the formation of amorphous carbon for the purpose of making a film with a lower resistance.

Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the carbon hydride gas of Fushimi in the place of the carbon containing gas of ('244) in view of ('768) for the purpose of making a conductive film with a lower resistance.

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-51244 in view of JP 2003-55768 as applied to claim 1 above, and further in view of Bower et al. (US 6,630,722), of record.

Regarding claim 11-13, ('244) in view of ('768) teaches all of the claimed limitations except for the carbon containing gas being acetylene gas.

Further regarding claims 11-13, Bower ('722) teaches in column 7, lines 33-36 that it is well known in the art to use acetylene gas in the making of carbon film for the purpose of improving the adhesiveness of the film.

Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the acetylene gas of Bower in place of the carbon gas of ('244) in view of ('768) for the purpose of improving the adhesiveness of the film.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph L. Williams
Primary Examiner
Art Unit 2879